

Green Audit Report-2023



PARIMAL MITRA SMRITI MAHAVIDYALAYA

**ADDRESS: NEAR SOONGACHI T.G, P.O: MAL,
DIST: JALPAIGURI, PIN: 735221**

Content

Sl. No.	Topics	Page No.
1	Green Audit Assessment Auditor	3
2	Definition and Meaning	3
3	Introduction	3
4	General Outlook of the Institute	3-4
5	Aims & Objectives of The Institute	4
6	Infrastructure of The Institute	4-5
7	Green Audit Committee	5
8	Green Audit Questioner	5-24
	8.1 Green Practices	7
	8.2 Energy Conservation	12
	8.3 Water conservation	14
	8.4 Waste minimization and recycling	16
	8.5 Air Quality	19
	8.6 Animal Welfare	20
	8.7 Environmental legislative compliance	21
	8.8 General Practices	23
9	Conclusion and Future Plan	25
10	Recommendations by the Auditor	25-26
11	Green Audit Certificate	27

1. Green Audit Assessment Auditor:

Sl. No.	Name	Designation	Affiliation
1.	Dr. Dhiraj Saha	HOD and Professor	Department of Zoology, University of North Bengal

2. Definition and Meaning:

Green Audit also known as Environmental Audit is an independent assessment conducted to evaluate an educational institution's environmental performance, resource utilization and compliance with environmental regulations.

The term "Green" means eco-friendly and is an acronym for "Global Readiness in Ensuring Ecological Neutrality" (GREEN). It aims to analyze environmental practices within and outside the educational institution which can have an impact on its eco-friendly ambience.

The audit is directed towards assessing the environmental impacts of an institution, assessing its performance for sustainable development and eventually identifying the best methods for creating a sustainable ecology on campus.

3. Introduction:

Green auditing is a means of assessing the environmental performance (Welford, 2002). It is a systematic examination of the interactions between any operation and its surroundings; which includes all emissions to air, land and water; landscape and ecology; the effects on the neighbouring community and the public's perception of the operating company in the local area. It is a systematic, documented, periodic, and objective review by regulated entities of facility operations and practices related to meeting environmental requirements (EPA, 2003).

4. General Outlook of the Institute:

PMS Mahavidyalaya strongly believes that a clean and green campus is critical to ensuring the greatest learning environment and a healthy ecology for everyone involved with the facility. The institution is committed to environmental sustainability and is dedicated in developing a green ecosystem for the enrichment of the mind heart and soul of the students.

Green Audit is a requirement of NAAC, National Assessment and Accreditation Council (a self-governing organization of India) which declares the Institutional grade.

SIGNIFICANT OBSERVATIONS:

- Environmental monitoring of the campus is being carried out.
- Noise level in the campus are well within the limit i.e below 50db at day time.
- Every year the college celebrates Environment Day on 5th June.
- The college also hosts wide variety of birds, different types of butterflies and insects.
- There are 2 gardens in the campus – butterfly garden and
- The college has a lush green garden containing some rare plants sprawling over a wide land.

5. Aims & Objectives of The Institute:

The vision of the college is to prepare dynamic, competent and caring citizens to meet the challenges of a global society while widening their intrinsic values. This college wishes to strengthen the dream of Parimal Mitra, the late visionary for Dooars, by putting this institution in the forefront of educational activities while carving a name for itself in the top echelons of the academic world.

Our Aims and Objectives include:

- To attain academic excellence.
- To enforce and maintain academic discipline in the campus.
- To infuse creative spirit among the learners and explore their talents and abilities.
- To promote innovative methods of teaching-learning and evaluation.
- To encourage students to aim at excellence not only in academic pursuits, but also in every aspect of human endeavor to achieve perfection.
- To enlighten students on the values of life and thereby creating morally and socially committed noble citizens.

6. Infrastructure of The Institute:

- The campus area of the college is 13.69 acre. The college plans and ensures that the available infrastructure in its sprawling campus is in line with its academic growth and is optimally utilized.
- It has well-furnished 32 class rooms, 2 smart class room, a seminar hall with projector, NCC, NSS, sports rooms and a playground.
- The main building houses the arts and commerce departments, a separate, science building was inaugurated on 11 July, 2018.
- There are well-equipped laboratories for Geography, Chemistry, Botany and Zoology.
- The Central Library of the college is well resourced and regularly updated.
- There are computers at the staff room, office and library.
- Aqua guard machines quench the thirst and a well-stocked canteen with separate sitting provisions for students and teachers takes care of the dietary needs of all.

- There are ramp facilities and wheel chair to meet the requirements of the students with physical disabilities.
- A sick room furnished with a first aid box, a sick bed and a stretcher is capable of resolving the primary health related issues.
- The college has two separate toilets for both boys and girls students and adequate toilets blocks for the staffs of the institution.
- The college has a generator to ensure uninterrupted power supply.
- The college is under CCTV surveillance.

7. Members of Green Audit Committee 2023-2024:

- Chairman : Dr. Nandita Sircar, Teacher-in-Charge, PMS College
- Convenor : Ms. Rumi Paul Chowdhury, Assistant Professor, PMS College
- Member : Ms. Maitri Saha, Teaching Faculty, PMS College

8. Green audit Questioner:

Details of the Campus area.

- Area of the campus: 13.69 acre
- Location: 26⁰ 52' 52''N and 88⁰ 45' 09E

Analysis of Land Use:

Categories of land use	Area (sq. M.)
Built up area	Approx. 4 acre
Free area	9.69 acre
Total area	13.69 acre

Which of the following are available in your institute?

Sl. No.	Infrastructure of the Campus	Yes/ No	Description (No., Area)
1	Garden	Yes	Sq.m
2	Playground	Yes	Sq.m

3	Classrooms	Yes	Classroom	Laboratory	Office
			32	04	01
4	Toilets	Yes	Particulars	Male	Female
			Students	05	07
			Staff	01	01
			Common	-	
5	GarbageOrWasteStoreYard	Yes			
6	Laboratory	Yes	Chemistry	Botany	Zoology
			01	01	01
7	Canteen	Yes			

WhatisthetotalpopulationoftheInstitute?

Particulars	Male	Female	Total
Students	3030	4070	7100
Teachers	22	23	45
Non-TeachingStaff	18	04	22
Sub Total	3070	4097	7167
What is the total number of working days of your campus in a year? <ul style="list-style-type: none"> • Teaching Staff - 210 days. • Non-teaching staff - 210 days. 			

Details of surrounding environment.

Sl. No.	Surrounding of the Institute	Yes/ No	Description
1	Municipaldumpyard	NO	
2	Garbageheap	NO	

3	Sewerline	NO	
4	Opendrainage	YES	
5	Industry	YES	
6	Bus/Railwaystation	YES	
7	Publichalls	NO	

8.1 Green Practices:

Sl. No.	Questionnaire	Answer
1	Isthereagardeninyourinstitute?	YES
2	Dostudentsspendtimeinthegarden?	YES
3	Howmany Plants are presentinCampus? Specify the number of Trees, Shrubs, etc. (Give details with photograph.)	115 plants and 65 types of trees
4	IstheCollegecampushaveanyGarden managing team?	YES
	NumberofStaffworkingin Garden managing team?	03
5	Number of Tree Plantation Drives organized byCollegeperannum.(IfAny)	01
6	NumberofTreesPlantedinLastFY and their SurvivalRate.	35 & 75%

Tree Diversity of Campus:

Sl No.	Binomial Name	Family	Vernacular Name	
			Nepali	Bengali
1	<i>Caesalpinia pulcherrima</i> (L.) Sw.	Fabaceae		Radhachura
2	<i>Acacia auriculaeformis</i> Benth.	Mimosaceae		Akashmoni
3	<i>Aegle marmelos</i> (L.) Corrêa	Rutaceae	Bael	Bail
4	<i>Atrocarpus heterophyllus</i> Lam.	Moraceae	Rukh Katahar	Kanthal

5	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Neem
6	<i>Araucaria columnaris</i> (G. Forst.) Hook.	Araucariaceae		Christmas Tree
7	<i>Livistona chinensis</i> (Jacq.) R. Br. ex Mart.	Arecaceaea		Chini Palm
8	<i>Cassia fistula</i> L.	Caesalpiniaceae	Raj Brichhya	Sonalu/Bador Lathi
9	<i>Cinnamomum verum</i> J. Presl	Lauraceae	Dalchini	Daruchini
10	<i>Bougainvillea spectabilis</i> Willd.	Nyctaginaceae		Kagoj Ful
11	<i>Citrus maxima</i> (Burm.) Merr.	Rutaceae	Chaski/Pomelo	Jambura/BatabiLebu
12	<i>Cocos nucifera</i> L.	Arecaceae	Nariwal	Narkel
13	<i>Delonix regia</i> (Hook.) Raf.	Caesalpiniaceae	Gulmohar	Krishnachura
14	<i>Catharanthus roseus</i> (L.) G. Don	Apocynaceae		Nayantara
15	<i>Durantaerecta</i> L.	Verbenaceae	Jacqual Katin	Duranta/ Katan Mehedi
16	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Rukh Amala	Amlaki
17	<i>Ixora chinensis</i> Lam.	Rubiaceae		Rongon
18	<i>Jasminum sambac</i> (L.) Aiton	Oleaceae		Beli
19	<i>Ficus religiosa</i> L.	Moraceae	Peepal	Peepul
20	<i>Hamelia patens</i> Jacq.	Rubiaceae		Muna
21	<i>Tectoma grandis</i> L. f.	Verbenaceae	Shahgoon	Segun
22	<i>Lagestroemia speciosa</i> (L.) Pers.	Lythraceae	Jarul/Borderi	Jarul
23	<i>Manihot esculenta</i> Crantz	Euphorbiaceae	Simal Tarul	Simul Aalu
24	<i>Moringa oleifera</i> Lam.	Moringaceae	Sheetal Chini/ Sajana	Shojne/ Shajna
25	<i>Morus alba</i> L.	Moraceae	Seto Kimbu	Tunth
26	<i>Murrayakoenigii</i> (L.) Spreng.	Rutaceae	Kadi Patta	Nimbhut/ Barsunga/ Kari pata

27	<i>Tabernaemontanadivaricata</i> (L.) R. Br. ex Roem. & Schult.	Apocynaceae		Tagar
28	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Annonaceae	Ashoka/ Ashau	Debdaru
29	<i>Murraya paniculata</i> (L.) Jack	Rutaceae		Kamini
30	<i>Psidium guajava</i> L.	Myrtaceae	Ambak	Peyara
31	<i>Mussaendaerythrophylla</i> Schumach& Thonn.	Rubiaceae		Mussanda

1. *Caesalpinia pulcherrima* → Radhachura



2. *Livistona chinensis* → Chini Palm



3. *Cassia fistula* → Bador Lathi



4. *Tectoma grandis* → Segun



5. *Polyalthia longifolia* → Debdaru



6. *Bougainvillea spectabilis* → Kagoj Ful



7. *Mussaenda erythrophylla* → Mussanda



8.2 Energy Conservation:

Sl.No.	Questionnaire	Response
1	List few ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.	Energy uses by the institute are listed below (i) Electricity for various office work (ii) Solar panel LPG for uses in canteen and laboratory.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Institutes utilize following techniques to save energy (i) Using of LED lights throughout the campus. (ii) Monitoring committee for the maintenance of less power consumption.
3	How many CFL/LED bulbs have your institute installed?	LED bulbs
4	Are any alternative energy sources employed/ installed in your institute? (photovoltaic cell for solar energy, windmill, energy efficient stoves, etc.) Specify.	Institutes had installed solar panels as an alternative source of energy.
	Do you run "switch off" drills at institute?	YES
5	Are your computers and other equipment's put on power-saving mode?	YES
6	Does your machinery (TV, AC, computer, printers, etc.) run on standby mode most of the time?	YES

Give the power consumption details of last year:

Sl. No.	Month (at least one complete year)	Electricity Consumption(KVAH)
1.	2021-2022	



8.3 Water Conservation:

Sl. No.	Questionnaire	Answer
1	List uses of water in your institute (Approx. amt.)	Institutes uses water daily for drinking, gardening in toilets and kitchen gardening and others, total daily usage is ltr.
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Institutes uses Water Tank to store water.
3	If there is water wastage?	No, water wastage was noticed in the campus.
4	Locate the point of entry of water and point of exit of wastewater in your institute.	Entry: Deep tube well Exit: Drainage system
5	Write down few ways that could reduce the amount of water used in your institute	We use RO system for the drinking water and for that the use of deep tube well water may be reduced.
6	Does your institute harvest rain water?	NO
7	Is there any water recycling system?	NO

Give the water consumption details of last year

Sl. No.	Month/ Year wise at least for last 3 year	Water Consumption (Litre)
1	2022-2023	2.2 lakh litre per month
2	2021-2022	1.8 lakh litre per month
3	2020-2021	0.5 lakh litre per month



8.4 Waste Minimization and Recycling:

Sl. No.	Waste Management System of the Campus	Yes/ No	Description
1	Does your institute generate anywaste?	YES	Mostly bio degradable waste.
	Bio Degradable	YES	
	Non-Biodegradable,	YES	
	Others		
2	What is the approximate amount ofwaste generatedperday?(in Kilograms/month)(approx.)	YES	Approximately 8 kg per day
3	How is the waste generated in theinstitute managed? By 1. Composting 2. Recycling 3. Reusing 4. Others(specify)	YES	The waste is segregated based on their nature in two separate bins and disposed off accordingly. Paper waste is recycled periodically.
4	Doyouuserecycledpaperin Institute?	NO	
5	Did you achieve zero garbage atyour institute?Ifyes, how?	NO	

Response:

❖ Solid and Liquid Waste Management:

The Institution has a regular and structured way of cleaning the campus. Besides the government appointed sweepers, there are casual part-time workers who regularly clean the garbage, and clear the clogging in the drains. The college wastes are segregated at source based on their nature of degradability. Two separate BINS have been set up in the college

premises for the collection of assorted waste produced in the campus. The GREEN Bin collects the degradable waste that are disposed off in the pits dug-in the campus and left for decomposition and the YELLOW Bin collects the non-degradable waste which is disposed off from time to time.

The Liquid waste from the Science departments are drained out in basins where they are diluted number of times before running them out through the common drainage system.

❖ Procedure:-

- **Waste Collection:** An efficient management of waste starts with placement of BINS in the campus. Dustbins are placed at canteens, each corridor of all building, in office area etc. The frequency of waste collection depends upon the sources. In academic and non- academic area which include provision store, general stores, classrooms and offices, waste generated is comparatively less and hence waste collection from offices, waste generated is comparatively less and hence waste collection from these sources are collected, treated as per their nature and then burn and transported by pickup trucks. The paper waste of the institute is assembled together and sent to an organized vendor for recycling.

Waste Management



Drainage System



Sewage System



8.5 AIR QUALITY:

SL NO:	QUESTIONNAIRE	ANSWER																				
1	Are the rooms in the campus are well ventilated?	YES																				
2	Window-Floor ratio of the Rooms	WINDOW: FLOOR= 25:1																				
3	No. of Air Conditioner Installed	01																				
4	Provide the details of the Institute-owned Motorized vehicles? No. of vehicles No. of vehicles more than five years old No. of Air-conditioned vehicles	<table border="1"> <thead> <tr> <th>Bus</th> <th>Car</th> <th>Van</th> <th>Other</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Bus	Car	Van	Other	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	Car	Van	Other	Total																		
0	0	0	0	0																		
0	0	0	0	0																		
0	0	0	0	0																		
5	Specify the type of fuel used by your Institute's vehicles.	N.A																				
6	Diesel	N.A																				
	Petrol	N.A																				
	CNG	N.A																				
	LPG	N.A																				
	Electric	N.A																				
7	Air Quality Monitoring Program (If any)	N.A																				
8	Students suffering from respiratory ailments?(If any)	N.A																				



8.6 Animal Welfare:

SL NO:	QUESTIONNAIRE	ANSWER
1	List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)	<p>Animals found in the campus are enlisted as follows -</p> <ul style="list-style-type: none"> (a) Sparrows (bird) (b) Crow (bird) (c) Pigeon (bird) (d) Grasshopper (insect) (e) Ants (insect) (f) Ground beetle (insect) (g) Praying Mantis (insect) (h) Earth worm (invertebrate)
2	How many dogs in your area have undergone Animal Birth Control - Anti Rabies (ABC-AR)?	NIL
3	Does your institute have a Biodiversity Club?	No, we do not have any Biodiversity Club

8.7 Environmental Legislative Compliance:

SL NO:	QUESTIONNAIRE	ANSWER
1	Is your institute aware of any environmental laws pertaining to different aspects of environmental management?	Yes, the college authority is well aware of the different Environmental Laws.
2	Does your institute have any rules to protect the environment? List possible rules you could include	Yes, the college campus is a (A) "NO TOBACCO ZONE ." (B) SAY NO TO PLASTIC zone
3	Has Environmental Ambient Air Quality Monitoring been conducted by the Institute?	NO
4	Has Water and Waste water Quality Monitoring been conducted by the Institute?	NO
5	Has monitoring of DG sets been conducted by the Institute?	NO
6	Is any warning notice, letter been issued by state government bodies?	NO
7	Does any Hazardous waste generated by the Institute?	The laboratory are the sources of some hazardous chemicals namely- CORROSIVE CHEMICALS <ol style="list-style-type: none"> 1. Sodium hydroxide (NaOH) 2. Amines 3. Sulphuric acid 4. Hydrochloric acid 5. Nitric acid CARCINOGENIC <ol style="list-style-type: none"> 1. Benzene FLAMMABLE CHEMICALS

		<ol style="list-style-type: none"> 1. Acetone 2. Methanol 3. Cyclohexane 4. Ethanol
8	Does any Bio medical waste generate by the Institute? If yes, explain its category and disposal method	NO



Celebration of **World Environment Day** on 5th June in College Campus

8.8 General Practices:

SL NO:	QUESTIONNAIRE	ANSWER
1	Are you aware of any environmental laws pertaining to different aspects of environmental management?	YES
2	Does your institute have any rules to protect the environment? List possible rules you could include.	Yes, The Environmental laws are followed by the institution are subjected to the acts stated below. <ul style="list-style-type: none"> • “THE ENVIRONMENT PROTECTION ACT”, 1986 • “THE WATER ACT”, 1974
3	Is there any housekeeping schedule in your campus?	No, there is not any housekeeping schedule
4	Are students and faculties aware of the ways to keep environment clean? If Yes, explain	Yes, Students and faculty members maintain cleanliness in the campus by the ways stated below <p>(A) Proper use of dustbins is done to throw dry wastes like waste papers, polythene, empty bottles, any other forms of plastics etc.</p> <p>(B) The perishable wastes are dumped in proper pits to avoid foul smell and ensure cleanliness.</p> <p>(C) Minimum use of toxic chemicals is done in laboratory practice.</p> <p>A keen eye is kept to cut down on unnecessary usage of electricity.</p>
5	Does important days like World Environment Day, Earth Day, etc. are celebrated in your campus?	Yes, they celebrate some of days as mentioned below World Environment Day is

		observed on 5 th June.
6	Does your institute have any recognition/certification for environment Friendliness?	NO
7	Does your institute use any renewable energy?	NO
8	Does your institution conducts a green/environmental audit of its campus?	Yes, An initiative to harness solar energy (Renewable energy) is undertaken by installing solar cells (photovoltaic cells) in the college campus.
9	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	NO



9. Conclusion and Future Plan:

The College makes a significant effort to act in an environmentally responsible manner and takes into account the environmental effects of the majority of its activities. The green audit report will assist in the process of attaining an eco friendly approach to the sustainable development of the college. Hope that the results presented in the green auditing report will serve as a guide for educating the college community on the existing environment related practices and resource usage at the college as well as spawn new activities and innovative practices.

The recommendations in this report suggests some more ways in which the College can work to improve its practices and develop into a more sustainable institution. It's important to begin a few things, such as recycling of waste water, composting . Additionally, we think to construct rainwater pits at appropriate places and restoration activities may be initiated to sustain the health of ponds and wetlands in and around the campus. We are planning to formulate a green policy/environmental policy for its sustainable development. Also to curb the menace of waste management we are planning to use eco-friendly and scientific techniques. This may lead to the prosperous future in context of Green Campus & thus sustainable environment and community development.

10. Recommendations for Sustainable Environment:

- A proper step may be taken to minimize the environmental degradation by means of developing '**Sanitation and hygiene policy**', '**Water conservation policy**', '**Waste management policy**' and '**Green campus and Environment policy**' in collaboration with Governmental and Non-Governmental Organizations.
- **Rainwater harvesting facilities** may be established at both administrative and academic campuses, foreseeing future needs of water. Further, **rainwater pits** can be prepared at appropriate places identified and restoration activities may be initiated to sustain the health of ponds and wetlands in and around the campus.
- A **medicinal garden** may be developed in the Campus with local plant varieties as well as herbs/plants with medicinal properties from other locality.
- **Local authority/municipality may be contacted for waste collection** from the College Campus thus avoiding improper disposal.
- The **concept of eco-friendly culture and sensitization programmes** may be arranged for the students to minimize the use of plastics, non-biodegradable materials and exploitation of natural resources which pose the environmental hazards.
- Policy on paper usage may be initiated with certain **guidelines to reduce the number of papers that are being used by the students for assignments, mini-projects and final year projects which in turn to reduce 60% usage of paper** as a commitment to curb the environmental damage.
- The **waste disposal management for dry wastes such as paper, cardboard, glass tin cans etc. and wet wastes such as vegetable waste, leaf litter, left-over food, etc.**

should be proper in which collection, transport, treatment and disposal of waste, together with monitoring and regulation of the wastes may be undertaken.

- Attempts may be made to segregate the wastes and to convert organic wastes into fertilizing material through **recycling and composting** processes which may be used for vegetation purpose.
- A well-established Biogas plant for energy efficiency management and to reduce the fossil fuel expenditure as well as impact on the environment may be created. The treated effluent from biogas plant may be diverted to the STP for storage and utilized for irrigation purpose. The biogas produced from the plant are utilized for cooking, and the residual dung and digested slurry are used as manuring.
- Students may be taken to some industrial areas including the waste management sites to teach about the **recycling of wastewaters, solid wastes, natural ecosystem, pollution free environment and environmental education**.
- Green habitat concept should be adopted for all the building construction activities of the University in future, which may help a long way in reducing energy usage, increasing aesthetic appeal of the buildings and class rooms, besides **reducing carbon foot print**. Further, more green spaces should be established all around the campus around larger trees and shades for the benefit of the students.
- A commitment to keeping students in conducting various competitions viz., painting, pencil sketching, rangoli, paste the picture, wealth out of waste, debate on environmental days, essay writing, card making, etc., for the noble cause of environmental protection and nature conservation.
- Irrespective of the subjects, environmental education should be part of curriculum and for the post-graduate programmes at least one credit on environmental should be made compulsory. Alternatively, **one credit may be given to students participating in environmental conservation/awareness activities**.

GREEN AUDIT CERTIFICATE


This is to certify that Parimal Mitra Smriti Mahavidyalaya has successfully undergone Environmental Audit and met the standards during Green Audit 2023.



01/6/2023

(Signature)

Teacher-in-charge
PARIMAL MITRA SMRITI MAHAVIDYALAYA
MAL, JALPAIGURI



01.06.2023

(Signature)

Dr. Dhruj Saha Ph.D.
Professor
Department of Zoology
University of North Bengal
Siliguri - 734013, Dt. - Darjeeling, W.B.



